R Markdown

Anton Antonov

Saturday, April 25, 2015

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1 Science, I'm coming for you!

I am so excited to present my breakthrough research in quantum theory.

1.1 Theoretical basis

Let's imagine a **cat**. Not just any *random cat*, but a decent scientific one!

Like this:

This cat is

- fluffy
- ~~black~~ white

Cats and science have been together for a long time, e.g. Schrodinger's cat.

That's enough for the first page. No one likes too much text.

1.2 R to the rescue

We are using `library(knitr)` to make some calculations in R and put them here.

For instance, take the well known `iris` dataset. It is a data frame that consists of `5` columns (variables) and `150` rows (observations).

It starts like so:

```
head(iris)
```

```
##   Sepal.Length Sepal.Width Petal.Length Petal.Width Species
## 1          5.1         3.5          1.4         0.2  setosa
## 2          4.9         3.0          1.4         0.2  setosa
## 3          4.7         3.2          1.3         0.2  setosa
## 4          4.6         3.1          1.5         0.2  setosa
## 5          5.0         3.6          1.4         0.2  setosa
## 6          5.4         3.9          1.7         0.4  setosa
```

I'd like to calculate variable means across groups. Here's the code I use:

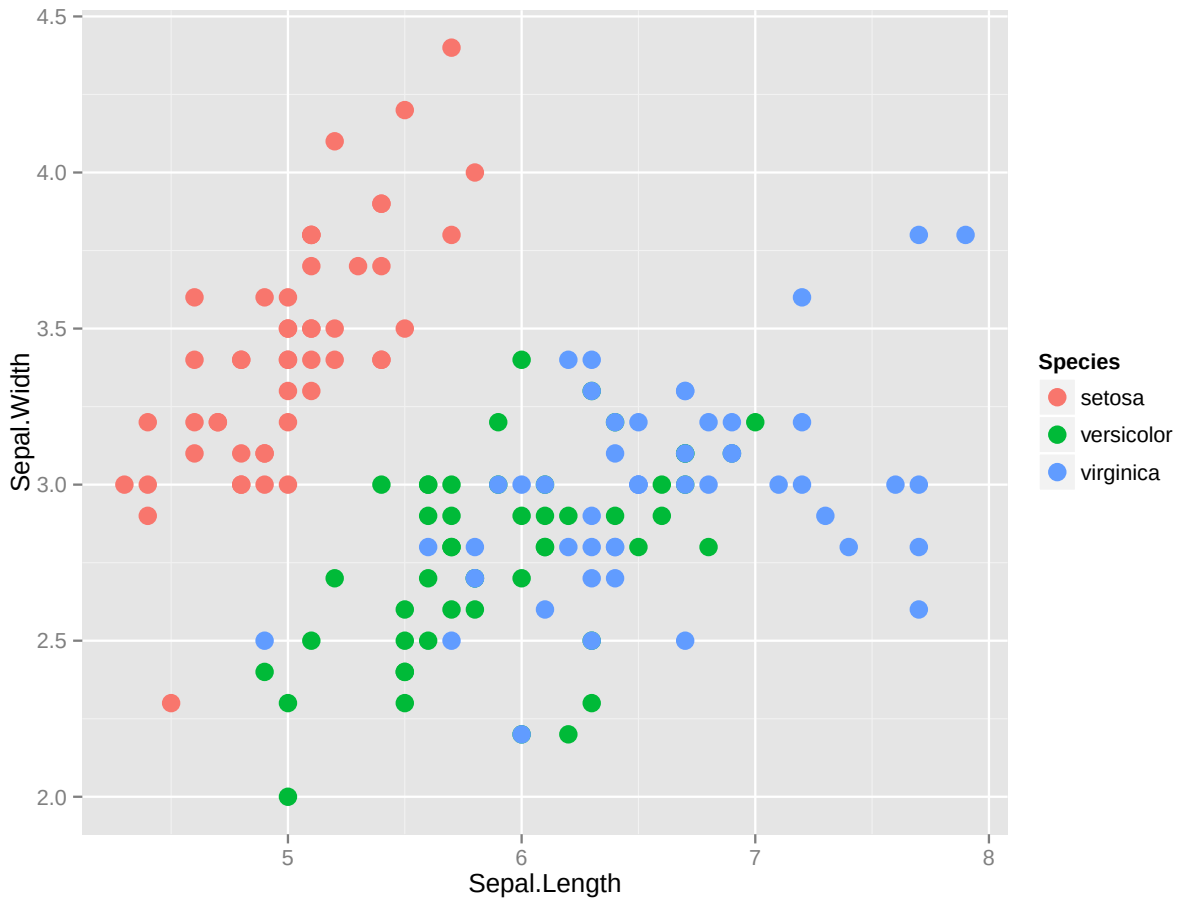
```
aggregate(subset(iris, select = -Species), iris[, "Species", drop = FALSE], mean)
```

Here's the output I get:

```
##      Species Sepal.Length Sepal.Width Petal.Length Petal.Width
## 1     setosa        5.006       3.428        1.462       0.246
## 2 versicolor        5.936       2.770        4.260       1.326
## 3  virginica        6.588       2.974        5.552       2.026
```

I can embed plots!

```
library(ggplot2)
ggplot(iris, aes(x = Sepal.Length, y = Sepal.Width, color = Species)) +
  geom_point(size = 4)
```



There's a `cache` option for lengthy computations.

```
## [1] "Result: 8.66260055722601"
```